

- 8 -

### IN THE ABSTRACT

Please replace the current abstract with the new abstract to read as follows:

A method of powder coating thermo powder resins to non-conductive plastic substrates, in particular, to polyamide materials and other non-conductive plastic substrates. After cleaning the substrate, a water-based adhesive/primer is applied to the substrate and then cured to increase the surface conductivity of the substrate to provide to better coating of the thermosetting powder to the substrate during curing.

The new abstract page follows.

### REMARKS

The abstract of the disclosure has been amended and is now a concise statement of the technical disclosure of the patent. It includes what is new in the art to which the invention pertains. Reconsideration and withdrawal of the objection to the abstract is requested.

The title of the application has been amended and is clearly indicative of the invention to which the claims are directed. Withdrawal of the objection to the title is respectfully requested.

The examiner has objected to the specification and in particular, the claims and claim 8. The matter has now been clarified with reference to the adhesive/primer. A discussion will follow in the response to the claim rejections.

The examiner has rejected 1 to 3, 12, 14, 15 and 17 under 35 U.S.C. 112, second paragraph. The claims have been amended and the subject matter has been clearly and distinctly set forth. The proper antecedents have now been provided in the claims.

Reference to "quickly" in previous claims 12 and 15 have been replaced by "in less than sixty seconds". The reference to "quickly" is clear to one of ordinary skill in this field as being less than sixty seconds and in view of the terminology being accepted by those skilled in the art, the appropriate amendment has been made to the claims to comply with the request by the examiner.

The examiner has rejected previous claims 1 to 6, 10, 14, 23 to 26 in view of Leach in view of Koenig. Reconsideration and withdrawal of the objection by the examiner is respectfully requested.

As stated by the examiner, the objection by the examiner does not relate to the presence of the adhesive/primer which is an essential of the present invention. Accordingly, the

- 9 -

inclusion in claim 1 with reference to the following discussion renders these claims patentable over Leach and Koenig. Neither Leach nor Koenig disclose the use of the adhesive/primer.

Similarly, the examiner has rejected claims 9, 11 to 13, 15, 16, 19 to 22 in view of Leach and Koenig in view of Liberto. Since these claims now depend from claim 1 which includes reference to the water-based adhesive/primer as discussed hereinafter, reconsideration and withdrawal of the objection to the claims is respectfully requested.

The examiner has further rejected claims 7, 8, 17 and 18 in view of Leach in view Koenig in view of Maekawa. The examiner states that the Maekawa *et al* is cited to show the primer. With respect, the feature of this invention being the water-based adhesive/primer provided a clear distinction over these references for the following reasons.

With respect, the use of the adhesion promoter in the claims of the present application when considered in view of the prior art is entirely different and not disclosed nor rendered obvious by the prior art taken individually or together. The adhesion promoter of the claims of the present application is for the purpose of increasing the surface conductivity of the substrate prior to the application of the first powder coat. The process comprising the steps of cleaning the substrate, applying a water-based adhesive/primer, curing the adhesive/primer and then applying the thermosetting powder and curing. The heating of the substrate which has applied thereto the water-based adhesive/primer is for the purposes of evaporating the water element from the water-based adhesive/primer as stated on page 7 of the disclosure. This leaves the solid elements of the adhesion promoter on the surface of the part. The solid components of the adhesion promoter increases the surface conductivity which allows for the powder attraction to the substrate. It is this aspect of the process which makes the present invention unique when compared to the prior art.

The prior art does not disclose nor render obvious the application of the water-based adhesive/primer and the subsequent curing to increase the surface conductivity of the substrate to increase the adhesion of the powder to the substrate. This provides an improved product when compared to the prior art.

Leach (U.S. patent 5338578) does not require an adhesion promoter. Koenig (U.S. patent 4885187) does refer to an adhesion promoter but it does not use the adhesive/primer prior to the application of the thermosetting powder.

The adhesion promoter disclosed in Maekawa *et al* is used to improve the adhesion between the paint and the substrate. This patent discloses the use of the promoter to improve the substrate protection and to improve adhesion. However, it is exclusively used in liquid paint application and is not applicable to powder coating as the claims of the present application are restricted. The application of the adhesive/primer of the claims of the present application neither improves nor degrades adhesion. It is solely for the purpose of improving the conductivity of the substrate.

- 10 -

Accordingly, the amended claims clearly define over the art cited by the examiner and allowance is respectfully requested.

It is submitted that the foregoing amendments are such as to comply with the formal matters raised in the Official Action and this application remains in condition for allowance.

If for any reason the Examiner is of the view that this application is not now in condition for allowance, the Examiner is requested to telephone the undersigned at 1-416-961-5000 so that an interview may be arranged to expedite allowance of this case.

Respectfully submitted,

**ALLIANCE SURFACE FINISHING INC.**

By:

Paul Herbert  
Reg. No. 27,278

PLH/las